

Claims

[c1]

An antenna comprising:

an insulating film;

a first connection cable⁴ formed on said insulating film; and

a first radio wave resonator³ formed integrally with said first connection cable.

[c2]

The antenna of Claim 1 wherein said first connection cable comprises a signal line coupled to a feed point of said first radio wave resonator.

[c3]

The antenna of Claim 2, further comprising;

a ground circuit disposed on both sides of said signal line; and

a shield material which shields one surface of said signal line and said ground circuit wherein the surface is a surface selected from the group consisting of an upper and a lower main surface of said signal line and said ground circuit.

[c4]

The antenna of Claim 3, wherein said shield material is a material selected from the group consisting of: a metal plated unwoven fabric, a metal powder deposited unwoven fabric, a metal foil applied unwoven fabric, and metal foil applied unwoven fabric.

[c5]

The antenna of Claim 3, wherein said shield material is a material selected from the group consisting of: a metal plated woven fabric, a metal powder deposited woven fabric, a metal foil applied woven fabric, and metal foil applied woven fabric.

[c6]

The antenna of Claim 2, further comprising;

a ground circuit disposed on both sides of said signal line; and

a shield material which shields both an upper and a lower main surface of said signal line and said ground circuit.

[c7]

The antenna of Claim 6, wherein said shield material is a material selected from the group consisting of: a metal plated unwoven fabric, a metal powder deposited unwoven fabric, a metal foil applied unwoven fabric, and metal foil applied unwoven fabric.

[c8]

The antenna of Claim 6, wherein said shield material is a material selected from

the group consisting of: a metal plated woven fabric, a metal powder deposited woven fabric, a metal foil applied woven fabric, and metal foil applied woven fabric.

[c9] The antenna of Claim 1 wherein said insulating film is made of a flexible polyethylene selected from the group consisting of: PET (Polyethylene Terephthalate) and a flexible PEN (Polyethylene Naphthalate).

[c10] The antenna of Claim 9 wherein said insulating film is 5 – 75 μ m thick.

[c11] The antenna of Claim 1, further comprising:
a second connection cable are formed on said insulating film; and
a second radio wave resonator formed integrally with said second connection cable;
 wherein a portion located between said first connection cable and said first radio wave resonator and said second connection cable and said second radio wave resonator is notched whereby the portion is bifurcated.

[c12] The antenna of Claim 1, wherein an electric component of said first radio wave resonator is further integrally formed on said insulating film.

[c13] The antenna unit according to Claim 1, wherein said first radio wave resonator is a structure supporting a plurality of frequencies.

[c14] Apparatus comprising:
a body having an operational section;
a cover having a display which covers said body at its closed position; and
 a hinge interconnecting said body and said cover so that said cover hingedly moves in relation to said body between its closed and open positions; said cover contains a connection cable formed on an insulating film and a radio wave resonator formed integrally with the connection cable.

[c15] Apparatus of Claim 14, further comprising:
 a first antenna and a first signal processor therefor;
 a second antenna and a second signal processor therefor; the radio wave resonator comprises the first and second antennae^s, and

a selector which selects one of said first and second signal processors and couples the selected signal processor to a signal line connected to a feeding point of the radio wave resonator.